

# **AN EXPLORATORY STUDY ASSESSING THE EFFECTIVENESS OF A PROFESSIONAL RESPONSIBILITY COURSE**

**Tara J. Shawver**

*McGowan School of Business  
King's College  
Wilkes-Barre, Pennsylvania  
USA*

## **ABSTRACT**

Recent fraudulent financial scandals have the public questioning whether accountants and auditors have forgotten their professional responsibilities. Changes have been proposed by the Education Committee of the National Association of State Boards of Accountancy (NASBA) to increase the credit hour requirements in ethics education, supporting the importance of ethics training for our current students who will become our new professionals. However, prior studies on the effectiveness of ethics education in accounting have produced mixed results, leaving academics questioning whether ethics and professional responsibility can be taught. This study explores the impact of a 12-week professional responsibility capstone course required of all accounting seniors. This study takes a new approach in evaluating the effectiveness of ethics education by administering a course evaluation to assess the effectiveness of the components of the professional responsibility course (ethics intervention) in conjunction with the DIT-2, and vignettes related to accounting and business ethical dilemmas to determine whether ethical evaluations changed after an ethics intervention. This research provides interesting insights into the assessment of classroom instruction that are significant for faculty who wish to evaluate the effectiveness of ethics interventions.

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**Key words:** Accounting ethics, ethics education

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## INTRODUCTION

The Education Committee of the National Association of State Boards of Accountancy (NASBA) has proposed changes to the content of the 150 semester hour requirements that would increase the number of semester hours for ethics education, including three hours of ethics in accounting and three hours of ethics in business. Prior researchers suggest that ethics is not adequately covered in accounting programs (Frecka and Nichols, 2004; Wyatt and Gaa, 2004; Cohen and Pant, 1989) and most people agree that ethics should be a part of an accounting curriculum. However, studies on the effectiveness of ethics education in accounting have produced mixed results and there is disagreement as to how ethics should be covered in our accounting programs. Given these mixed results on the impact of accounting ethics education and publicized earnings scandals, many academics are left wondering where to go from here.

This study explores the impact of a 12-week professional responsibility capstone course required of all accounting seniors. This study extends ethics research by administering the DIT-2 to assess the level of moral reasoning of accounting students, accounting and business related vignettes developed by Cohen et al. (1998, 1996, 1993) for evaluation of ethical situations, and a course evaluation based on the goals of accounting ethics education that has never been tested by prior research. Conclusions are made from responses to course evaluations as to which course components are most effective in addressing the goals of ethics education in the classroom. Research assessing course components will allow educators to improve the effectiveness of teaching professional responsibility and ethics in our accounting classrooms.

### Support for Accounting Ethics Education

The accounting profession has attempted to respond to earnings scandals by passing the Sarbanes-Oxley Act, and the Statement of Auditing Standards (SAS) 99 to clarify issues related to ethics and fraudulent financial reporting. However, there is growing concern that ethics and professional responsibility should become more prevalent in our accounting curriculums. The proposal from the National Association of State Boards of Accountancy (NASBA) to increase the number of semester hours for ethics education highlights the need to educate our future accounting professionals specifically in accounting ethics. This proposal validates prior researchers' concerns that ethics is not adequately covered in accounting programs (Frecka and Nichols, 2004; Gaa and Thorne, 2004; Wyatt and Gaa, 2004; Cohen and Pant, 1989).

One problem with ethics education suggested by Langenderfer and Rockness (1989) is that ethics discussions are often held at the philosophical level, rather than exposing accounting students to ethics at a practical business level. "Students need to think about ethical issues and how they as individuals will face the issues before they are confronted with real-world dilemmas" (Langenderfer and Rockness, 1989, p. 61). Further, Wyatt expressed the need to integrate ethics throughout the accounting curriculum rather than as "an appendage to an auditing course" (Wyatt and Gaa, 2004, p. 28).

Most schools agree that some ethics education should be incorporated within the accounting curriculum (Gunz and McCutcheon, 1998; Cohen and Pant, 1989; McNair and Milan, 1993);

however, “few are willing or able to devote entire courses to such teaching” (Gutz and McCutcheon, 1998, p. 1146). This feeling is still apparent today when one considers that out of 163 AACSB accredited master’s degree accounting programs, only four schools offer a course in professional responsibility (Romal and Hibscheiler, 2004). For those who do attempt to teach ethics, one might ask “where do I start?”.

### **Goals of Accounting Ethics Education**

Accounting has yet to define a set of goals for accounting ethics education. Morris (2001) conducted a survey of business ethics professors and determined that the primary objective of a business ethics course is to enhance the clarity of thought in how students explain moral judgments or decisions. Recent literature suggests offering more cases dealing with ethical dilemmas, limiting ‘preaching’ the answers to ethical situations, and challenging students to decide how they would deal with ethical issues (Wyatt, 2004, p. 53). Loeb (1988, p.32) describes the only comprehensive list of accounting ethics education goals which are based on suggestions from Callahan (1980) as follows:

1. Relate accounting education to moral issues.
2. Recognize issues in accounting that have ethical implications.
3. Develop a “sense of moral obligation” or responsibility.
4. Develop the abilities needed to deal with ethical conflicts or dilemmas.
5. Learn to deal with the uncertainties of the accounting profession.
6. “Set the stage for” a change in ethical behavior.
7. Appreciate and understand the history and composition of all aspects of accounting ethics and their relationship to the general field of ethics.

Callahan (1980) provides details of the importance of each of these goals. To relate accounting education to moral issues, students must understand that each of us live in a web of moral relationships where moral choices are inevitable and often difficult. In recognizing that issues in accounting have ethical implications, students should be challenged to make conscious, rational attempts to identify issues needing judgment. Developing a sense of moral obligation encourages the ethical thinking needed for one to act in a way that is perceived as right and good. In developing abilities to deal with ethical conflicts, skills are needed to understand that moral choices will have consequences and students need the skills to deal with ethical dilemmas. A professional responsibility course should develop understanding of the ethical problems that face particular professions so that our students can learn to deal with uncertainties within our discipline. Callahan (1980) suggests that not only is it important that a course help a student to recognize an ethical issue, but it should help provide an understanding of the importance of changing one’s behavior after a moral judgment and analysis has been completed. Further, developing an understanding of the cultural, political, and social aspects of a profession should be a goal in most types of ethics courses.

Loeb (1991) suggests that an evaluation as to whether ethics instruction is meeting course goals can be accomplished by interviewing students, faculty, alumni, and employers. Since prior research on the effectiveness of ethics education has produced mixed results, this research examines specific course components to explore the possibility of the effectiveness of these issues at a micro level by administering an anonymous survey to students who have just completed the professional responsibility course.

### **The Professional Responsibility Course**

This research examines the specific course components within a professional responsibility capstone course to explore the possibility of the effectiveness of these issues at a micro level. The course has several components, including textbook readings, case analyses, class discussions, a research paper, and exams.

The textbook<sup>1</sup> is used throughout the course to identify theoretical models used for ethical decision-making, while focusing on practical real-world cases. Discussion of the textbook material and application of the theory and professional codes of conduct are important parts of the course, which can be extended for use in case analyses, exams, and in the research paper.

Prior to class, each student completes a written case analysis dealing with complicated issues such as earnings manipulations, stakeholder interests, codes of conduct, crisis management and cultural/societal concerns. Students are expected to identify the ethical issues and alternative actions, and then provide an ethical evaluation including the pros and cons of the issues presented in each case. The instructor grades the case based on the analysis of the issues and completeness of the response to evaluating each action within the case. To aid in the learning process, the instructor offers suggestions and identifies areas the student should have considered in his/her analysis. Loeb (1991) suggests that case analyses may contribute to goals 1, 2, 3, 4, 5 and 7.

One student is selected in advance to present each case to the class, and further group analysis occurs after the individual student presents his/her analysis. Each individual student is required to present his/her assigned case and participate in all group discussions. Students are encouraged to respectfully question each other's views in an attempt to foster the free interchange of ideas, which is a part of the learning process. Loeb (1991) suggests that participation in class discussions may contribute to goals 1, 2, and 7.

Each student is responsible for a research paper based on a subtopic within the textbook. It is expected that the student will explore research found in accounting and business journals. Each student presents the results of his/her research to the class and answers questions about the project. Loeb (1991) suggests that a research paper may contribute to goals 1, 2, and 7.

The course includes a midterm and final examination to test students' knowledge of the theories and application of their professional responsibilities discussed during class. The exams contain short answer questions and cases similar to the written case analyses. Loeb (1991) suggests that exams may contribute to goals 1, 2, and 7.

The course objectives are consistent with the mission of the School of Business in seeking to develop in its students the professional knowledge and skills needed to function successfully in the global economy and a commitment to exercising their professional responsibilities in an ethical and socially responsible manner. To achieve these goals, the School of Business provides a student-centered learning environment designed to stimulate intellectual development, encourage critical and ethical thinking, and develop professional competencies that are current with today's business environment.

### **Hypotheses**

In relation to the goals of accounting ethics education suggested by Loeb (1991), I hypothesize the following:

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<sup>1</sup>Business & Professional Ethics for Accountants by Leonard J. Brooks, 2004

- H1a:** Case analyses, research papers, class discussions, and exams teach accounting students to relate moral issues.
- H1b:** Case analyses, research papers, class discussions, and exams teach accounting students to recognize issues in accounting that have ethical implications.
- H1c:** Case analyses develop a “sense of moral obligation” or responsibility.
- H1d:** Case analyses develop the abilities needed to deal with ethical dilemmas.
- H1e:** Case analyses develop abilities to deal with the uncertainties of the accounting profession.
- H1f:** Case analyses, research papers, class discussions, and exams develop an appreciation and understanding of the history of accounting.

### **Research Question**

Callahan (1980) suggests many important goals of teaching ethics and also offers a discussion of the importance of whether courses on ethics can be expected to set the stage for behavioral change. Theoretical literature has not specifically suggested individual course components that may address the goal of whether a professional responsibility course can “set the stage for a change in ethical behavior.” However, several benefits of case analysis have previously been discussed, including that case analyses can be utilized to teach accounting students to relate moral issues, and to develop a sense of moral obligation and the abilities needed to deal with ethical dilemmas. Velasquez (1992) suggests case or real-world problem analysis can be used to analyze a problem, apply ethical frameworks and develop possible solutions.

Barnes et al. (1994) identifies that lectures about judgment and memorizing principles have limited impact in applying real-world problems and suggests the case method of teaching. “It puts the students in an active learning mode, challenges them to accept substantial responsibility for their own education, and gives them first-hand appreciation of, and experience with, the application of knowledge to practice” (Barnes et al., 1994, p. 3). After a student completes an analysis and develops possible solutions, a student may choose to modify their own behavior, demonstrating that case analysis may set the stage for a change in ethical behavior. Therefore:

- R1:** Can case analyses “set the stage for” a change in ethical behavior?

### **Defining Issues Test (DIT-2)**

Prior research that has examined the effectiveness of ethics interventions has used the DIT to measure a change in an individual’s P-score. The DIT (Rest, 1979) and the DIT-2 (Rest, Narvaez, Thoma & Bebeau, 1999) evolved based on Kohlberg’s (1969) six stages of moral development. Higher DIT P-scores imply higher levels of moral reasoning. Studies on the effectiveness of ethics education in accounting measuring the change in P-scores have produced mixed results. Poneman (1993) did not find increases to DIT P-scores after integrating ethics modules into an auditing course. Hildebeitel and Jones (1991) found that decisions of a personal nature were not affected by

integrating ethics modules. St. Pierre et al. (1990) did not find increases to DIT P-scores when comparing accounting students with no ethics instruction to accounting students who have received ethics instruction. Earley and Kelly (2004) found no increases to DIT P-scores after a one-semester course. Ponemon (1993) believes that the traditional education in accounting may constrain or inhibit moral development; therefore, “ethics education in accounting should be replaced by formal courses in programs that foster the highest order in ethical reasoning” (Ponemon, 1993, p. 189).

Other researchers have found increases in DIT P-scores after an ethics intervention. Abdolmohammadi and Reeves (2000) found modest increases in DIT P-scores as a result of taking a business ethics course, with pretest average DIT P-score of 36.5 and 41.0 post-test after completing a business ethics course. Armstrong (1993) found an average increase of 7.8 in DIT P-scores for 21 accounting students who completed a 10-week ethics course; the pretest average DIT P-score was 49.5, with 57.3 post-test. Bernardi et al. (2002) found that programs that emphasize critical thinking may increase accounting students’ moral reasoning. Rest (1979) argued that moral reasoning is a distinct cognitive domain and can be taught. Therefore, I hypothesize the following:

- H2:** Accounting students receiving ethics instruction during the one semester professional responsibility course will develop higher levels of ethical reasoning as measured by the DIT-2 P-score.

### **Accounting Specific Situations**

Poneman (1993) suggests that the DIT “may be too crude a measure to capture accounting students’ ethical reasoning. Perhaps an instrument with ethical issues framed in the context of accounting or auditing would provide a more precise measure of moral development” (Poneman, 1993, p. 205). Researchers have found some increases in moral reasoning after a one semester course using accounting specific situations, rather than the general DIT situations (Early and Kelly, 2004). Specific subtleties, external pressures, internal pressures and changes in an ethical situation can change both the ethical judgment and behavior of an accountant (Flory et al., 1993). In this paper, the vignettes developed by Cohen et al. (1998; 1996; 1993) are used for the applicability of the scenarios to accounting and business situations, whereas the DIT does not specifically relate to accounting or business decisions. Therefore, I hypothesize the following:

- H3:** Accounting students who have received ethics instruction over a one-semester professional responsibility course are more likely to identify unethical accounting and business situations after completion of the coursework.

## **METHODOLOGY**

The questionnaire was administered during the first week of a professional responsibility course offered in the spring of 2003; twelve weeks later the same questionnaire was again administered. The entire senior class of accounting students at a small AACSB accredited institution participated in this study. Each questionnaire was administered during class time with instructions on how to complete each section. Each respondent was asked to complete the anonymous survey and was informed that participation is voluntary. Each survey contained a course evaluation, the DIT-2, the Cohen vignettes, and the short version of the Impression Management (IM) scale. Out

of thirty-one students who completed the survey, twenty-seven usable responses were obtained; four were purged as a result of the DIT-2 validity checks.

A section of the survey included course goals previously suggested by Loeb (1988). This part of the survey has not been used in prior research. A pre-test was conducted on thirty intermediate accounting students. Minor modifications to the instructions were made as a result of the pre-test. In an attempt to determine appropriate methods that were effective for each student, I asked that each respondent evaluate the course components and these goals on a 5-point Likert scale ranging from “no effect” to “great effect.”

A section of the survey included the DIT-2 that calculates a P-score for each respondent. The independent variable, moral development (P-score), will be used to identify the change in the students’ level of moral reasoning as a result of taking the ethics course. The DIT-2 is a structured, self-administered test that can be objectively scored. Each subject responds to five standardized vignettes by ranking twelve of the most important rationales for decisions in each situation. The five vignettes deal with situations that have societal implications, such as stealing food for a starving family, administering medicine to help a fatally ill person die, reporting an unfavorable story about a political candidate, destroying property, and holding an “open” school board meeting after threats to the board. The P-score measures the relative importance to principled moral considerations in making a decision about an ethical dilemma (Rest, 1979).

A third section of the survey contained the eight vignettes that are accounting and business related. Each respondent indicated his/her belief of whether the action was ethical on a 7-point Likert scale ranging from “ethical” to “unethical.” Appendix A contains all eight vignettes that are briefly described below:

1. choosing to lay off a new hire or a long-term employee
2. promoting a product that has been insufficiently tested
3. offering a bribe to promote business
4. sharing software with a friend
5. early shipping of product to meet a quarterly bonus
6. a credit manager loaning money to a friend
7. expensing personal gifts as a business cost
8. changing an estimate for bad debt to increase reported income

Since this research addresses ethical issues that may or may not be believed to be socially responsible, this study uses the short version of the Impression Management (IM) scale to determine if the respondents are providing socially acceptable answers. Paulhus (1991) developed the Balanced Inventory of Desirable Responding (BIDR) and the IM scale. The IM measure is a set of questions used to identify impression management. Impression management occurs when a respondent answers questions in a manner that deliberately under-reports socially undesirable acts and over-reports desirable acts or behaviors. These questions include statements such as “I always obey laws, even if I’m unlikely to get caught.” Each statement is rated on a 7-point Likert scale ranging from “not true” to “very true.” For this study, the mean IM for males was 3.14 with a standard deviation of 1.87, and females scored 4.07 with a standard deviation of 2.10. Paulhus found typical scores for males to average 2.93 with a standard deviation of 2.8, and for females to average 3.21 with a standard deviation of 2.8. The scores in this study are not statistically different than the typical

scores reported by Paulhus; therefore, we can believe that the respondents have not provided socially biased answers.

### **Independent Variables, Dependent Variables, and Definitions**

The evaluation of the effectiveness of teaching ethics to accounting students is done at the course level. The analyses for H1 (all subparts from a to f) and R1 includes seven multiple regression models. Each of the course goals has its own regression model. The independent variable in the regression model is a single course goal. The dependent variables in each model are the evaluations of specific course components including exams, text materials, participation, case analyses, and the research paper. Each student identifies whether the coursework has helped to identify a connection between each goal by responding to a 5 point Likert scale ranging from 1, identifying no effect, to 5, identifying a great effect. Each student evaluates each goal against each of the course components. Appendix B contains all of the course components and the questions used to evaluate each component.

## **RESULTS AND DISCUSSION**

### **Hypotheses**

Prior research on the effectiveness of ethics education has produced mixed results, so this research examines specific course components to explore the possibility of the effectiveness of these components at a micro level. Each student evaluates the course and each component against the goals adapted by Loeb (1988). Although not all components (exams, text, participation, cases, and research paper) address all seven goals, there are several components that address at least one goal according to the responses. Table 1 illustrates which course components are most effective for each respective course goal, including the regression coefficients and significance for all goals and course components.

In hypothesis H1a, it is expected that case analyses, research papers, class discussions, and exams teach accounting students to relate moral issues. Research papers, class discussion, and exams are not significant in the model. H1a is partially supported, identifying that case analyses are statistically significant, suggesting that a part of the professional responsibility course enhances the ability to relate accounting education to moral issues. Although there are no prior empirical studies for comparison purposes, the results of the current study indicate that case analyses are useful tools in assessing ethics education outcomes of relating accounting education to moral issues.

In hypothesis H1b, it is expected that case analyses, research papers, class discussions, and exams teach accounting students to recognize issues in accounting that have ethical implications. H1b is partially supported. Text materials and case analyses are statistically significant in developing the ability to recognize issues in accounting that have ethical implications; however participation, exams, and research papers are not statistically significant. These results are consistent with Loeb's (1991) suggestion that text materials and cases analyses are useful tools for assessing a student's ability to recognize issues in accounting that have ethical implications. The text material and case analyses are useful in addressing the complicated issues surrounding an accountant's professional responsibility. These materials specifically address professional responsibility and codes of conduct that highlight how accountants and auditors are an integral part of society, and that each decision has consequences and ethical implications.

In Hypothesis H1c, it is expected that case analyses develop a "sense of moral obligation" or responsibility. H1c is not supported. Instead, the study finds that exams are statistically

significant. The exams contained short answer questions and case analyses similar to the case analyses that each student completed for the class. Students are expected to apply knowledge of professional codes of conduct and identify ethical issues, alternative actions, and provide an ethical evaluation of each issue. This encourages ethical thinking in response to exam questions in a way that is perceived as right within our professional codes of conduct.

Hypothesis H1d expects that case analyses develop the abilities needed to deal with ethical conflicts or dilemmas. H1d is not supported. The results find that text materials are statistically significant to enhancing the abilities needed to deal with ethical conflicts or dilemmas. As discussed earlier, the text materials focus on practical issues and development of the skills needed to deal with complicated accounting issues. The text discusses real-world situations and provides a student with an understanding of both a theoretical approach and a practical approach to assess conflicts.

Hypothesis H1e expects case analyses to develop abilities to deal with the uncertainties of the accounting profession. H1e is not supported. Instead, the research paper is statistically significant. The research paper was a project where the student could expand on a complicated issue of interest and study it further. The student was expected to explore current theoretical and empirical research on his/her self-selected topic. The research paper enables the student to explore materials available outside of the traditional course material to analyze several differing viewpoints (including their own) in his/her written analysis; therefore the research paper enhances the student's ability to deal with the uncertainties of the accounting profession.

In Hypothesis H1f, it is expected that case analyses, research papers, class discussions, and exams develop an appreciation and understanding of the history of accounting. Results for H1f are partially supported. Class participation is significant and enhances the appreciation and understanding of the history and composition of all aspects of accounting. These results are consistent with Loeb's (1991) suggestion that class participation can be used to assess an understanding of the history and composition of all aspects of accounting. The interaction of differing student viewpoints during class discussions broadens perspectives, and provides an appreciation and understanding of the complicated issues presented during the class.

Research question 1 suggests that case analyses are significant and "set the stage for" a change in ethical behavior. Loeb (1991) suggests that assessing the outcome of setting the stage for a change in ethical behavior may be difficult to evaluate. The case analyses specifically deal with complicated issues surrounding professional responsibilities; an analytical review of such issues highlights the impact of behaviors. Therefore, case analysis may enhance the student's ability to analyze possible consequences, enabling a change in ethical behavior.

Each course component is an integral part of an accounting professional responsibility course and in some way contributes to the effectiveness of teaching accounting ethics. Each regression model for each individual hypothesis is significant with adjusted  $R^2$  ranging from .32 to .58.

To further examine H1, an examination of Cronbach's alpha for each of the goals within the course were reviewed for each course component. The Cronbach's alpha for all seven goals showed values ranging from .87 to .92 (exams .87, texts .90, cases .92, paper .91, participation .92). A new total score variable is created by summing each response from the seven course goals for each course component. This summed score for each component is included in a model with a summed score for the course using the same goals. Table 2 illustrates the model of the summed course components and the goals for the course. A linear regression produced an adjusted  $R^2$  of .813 for all the course components, identifying the paper, cases, and exams as statistically significant while the text and participation were not statistically significant in evaluating the effectiveness of the entire

**TABLE 1**  
**Regression Coefficients for Course Goals vs. Course Components**

Goals	Adj R <sup>2</sup>	Components of the Course (Regression Coefficient/p-Value)				
		Exam	Text	Cases	Paper	Participation
Relate accounting education to moral issues	0.49	0.595 0.558	0.123 0.903	1.873 0.075*	0.699 0.492	1.554 0.135
Recognize issues in accounting that have ethical implications	0.58	0.955 0.350	2.204 0.039**	1.917 0.069*	-0.742 0.466	0.583 0.566
Develop a “sense of moral obligation” or responsibility	0.53	2.248 0.035**	1.452 0.161	1.017 0.321	-0.169 0.867	0.782 0.443
Develop the abilities needed to deal with ethical conflicts	0.32	0.579 0.569	2.290 0.032**	0.396 0.696	0.769 0.450	0.834 0.414
Learn to deal with the uncertainties of the accounting profession	0.43	0.805 0.430	0.895 0.381	1.252 0.224	1.756 0.094*	0.518 0.610
Set the stage for a change in ethical behavior	0.40	0.634 0.533	-0.139 0.891	1.810 0.085*	1.005 0.327	0.135 0.894
Appreciate the composition of all aspects of accounting ethics	0.44	1.225 0.235	-0.524 0.606	1.070 0.297	0.054 0.957	2.020 0.056*

\*\* significant for p-values less than .05  
\* moderately significant for p-values greater than .05 but less than .10

course. This suggests that the paper, case analyses, and exams are most effective when evaluating the effectiveness for all seven course goals together. The text and participation do provide value to the course as previously discussed; however, the other components have a stronger statistical significance in the model.

In addition to the seven goals described by Loeb, the survey asked additional questions relating to the course and left an open ended section for students to indicate any information they felt important regarding the impact of the course. The responses indicate that the course itself fostered an environment of trust, free expression of ideas, allowed for opportunities to analyze moral situations and challenge faculty ideas, as well as being effective in evaluating accounting ethical issues. Prior researchers have identified that these factors are important to encourage the ability of students to analyze moral situations (Huss and Patterson, 1993) and that students should be challenged to decide on how they would deal with ethical issues without listening to preaching by a faculty member (Wyatt, 2004). The open-ended question provided positive confirmations that the

**TABLE 2****Regression Coefficients for Summed Course Goals vs Summed Course Components**

Model Adjusted R <sup>2</sup> = 0.813	<u>t-Value</u>	<u>Significance</u>
Exam Sum	2.747	0.012**
Text Sum	-0.408	0.688
Cases Sum	1.848	0.079*
Paper Sum	2.040	0.054*
Participation Sum	1.363	0.187

\*\* significant for p-values less than .05

\* moderately significant for p-values greater than .05 but less than .10

course provided a greater understanding of ethical issues in accounting and proper conduct, and that the discussions were productive.

**H2**

Accounting students receiving ethics instruction during a one-semester professional responsibility course are expected to develop higher levels of ethical reasoning as measured by the DIT-2. The average P-score in week one was 31.18, and increased slightly to 32.15 at the end of the course. A t-test indicates that this minor change in P-score is not statistically significant. Therefore, H2 is not supported. These results are similar to those of Earley and Kelly (2004), Poneman (1993), and St. Pierre et al. (1990), who all found little to no relationship between ethics education and levels of moral reasoning. However, these results are not similar to Abdolmohammadi and Reeves (2000) and Armstrong (1993), who found modest increases in DIT P-scores as a result of ethics interventions. More empirical studies are needed since few studies have attempted to measure the impact of ethics education on levels of moral reasoning. As suggested by prior researchers, perhaps an instrument in an accounting context would be more useful in evaluating the impacts of ethics interventions for accounting students.

**H3**

H3 states that accounting students who have received ethics instruction over a one-semester professional responsibility course are more likely to identify unethical actions after the completion of the coursework. Table 3 provides the mean responses to the question “The action described above is ethical/unethical,” for responses from week 1 and week 12, for each vignette rated on a 7-point Likert scale. A response of 1 indicates that the respondent believes the action is ethical, whereas a response of 7 indicates that the action is believed to be unethical.

Table 3 illustrates that for six out of eight vignettes, the respondents indicated that they believed each action to be slightly more unethical (means closer to 7) after completion of the coursework than they believed prior to taking the course. This indicates an increased understanding or awareness that these situations have ethical implications. A paired sample t-test indicates that the

**TABLE 3****Ethical Evaluations**

	<u>Week 1</u>	<u>Week 12</u>	<u>Change</u>
V1	4.19	4.59	0.41
V2	5.85	5.85	0.00
V3	4.19	4.33	0.15
V4	3.56	4.30	0.74*
V5	5.07	5.31	0.23
V6	5.07	5.15	0.07
V7	5.41	5.46	0.05
V8	5.96	5.48	-0.48*

\*Significant change paired sample t-test

Responses closer to 1 indicate the action is believed to be ethical and a response closer to 7 indicates that the action is believed to be unethical

ethical evaluations are statistically significant after the completion of the coursework for two vignettes (V4 sharing software and V8 bad debt).

The comparison of the pre and post results for V4 indicate that after completion of the coursework, students consider sharing software as less ethical than they did when starting the course, with means increasing from 3.56 to 4.30. These results are interesting considering that the students evaluated this action as the most ethical of the eight vignettes (closest to 1). An explanation of this statistically significant change in attitudes could be due to the exposure to various ethical frameworks discussed in class, and the legal issues in various ethical dilemmas.

The comparison of the pre and post results for V8 indicate that the students evaluated the bad debt adjustment as unethical. However, the level of ethicality was lessened after the course, decreasing from 5.96 to 5.48. This result could be caused by exposing students to so many earnings scandals that they have received the impression that these manipulations are common. Although this course did discuss and evaluate the new provisions of Sarbanes Oxley, at the time of the course, no one had been tried or convicted of accounting fraud or earnings manipulations. As time goes by, the use of examples of accountants, CFOs, and CEOs who are prosecuted under the provisions of Sarbanes Oxley can be used during class discussion to further discourage earnings manipulations, focusing on examples of the consequences of a breach in ethical behavior.

### CONCLUSIONS

As evidenced by so many accounting scandals, many of the goals of accounting ethics education discussed in this paper have become extremely important today. It is necessary to convey to our students the importance of professional responsibility, and that accounting cannot continue to operate in a vacuum, expecting that accounting decisions do not pose ethical dilemmas with consequences for individuals, companies, and society. This paper is the first to attempt to assess the effectiveness of ethics education goals and the course components of an accounting professional responsibility capstone course.

Attempts must be made in accounting curriculums to either address ethics issues at the course level similar to the professional responsibility course described in this paper, or at the curriculum level throughout the accounting program. This study supports that each course component is statistically significant and is effective at addressing at least one of the goals of accounting ethics education. As a result of the ethics instruction, this study shows slight increases to a student's level of moral reasoning as measured by the DIT-2 P-score as well as changes in his/her ability to identify unethical accounting and business actions.

Public policy enforcement of ethics education through licensing for CPAs, as well as support from regulatory agencies such as the SEC, the newly created Public Company Accounting Oversight Board, and the system of justice, are alternatives for increasing awareness that ethical and socially responsible behavior are expected and will be enforced for the accounting profession. It is important that we educate our students prior to sending them off into the profession.

Increased exposure to ethical situations is needed in the accounting curriculum. Should economic resources allow, accounting curricula should consider a capstone course devoted to accounting ethics for accounting majors, allowing more focus on accounting issues for graduating seniors who will become our future professionals. If a capstone course is not feasible, our curriculums must implement ethics modules in each course that go beyond the traditional preparation for the CPA exam or reading a small section in the chapter text. The coverage of ethics at the general business level is often not sufficient in dealing with the complicated issues our students will face as future accounting professionals.

With few studies in this area, it is difficult to assert whether a capstone professional responsibility course is more effective than an integration of ethics throughout the accounting curriculum. Since there are few studies that have attempted to measure the impact of the level of moral reasoning as a result of accounting ethics education and intervention, more empirical studies are needed on larger sample sizes. Limitations of this study include a small sample size from one educational institution. However, even with a small sample, this research explores new ground that has not been tested by prior research by assessing the effectiveness of course components. This study provides a foundation for future research to build upon in a critical area of accounting ethics education. Future research may wish to use a control group to examine whether similar results are found with no ethics instruction or if similar results can be found by embedding ethics instruction into other courses such as auditing or advanced accounting. Future research may wish to survey working professionals to explore the impact of CPE ethics education and to provide feedback explaining the moral judgments or decisions of practicing professionals. This paper outlines a place to start for accounting educators to assess the effectiveness of course components within a professional responsibility course.

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## APPENDIX A

### Accounting and Business Vignettes

1. A firm has been hard hit by recessionary times and the partners realize that they must scale back. An analysis of productivity suggests that the person most likely to be terminated is a long time employee with a history of absenteeism due to illness in the family. Action: instead, the partner in charge lays off a younger, but very competent, recent hire.
2. A company has just introduced a highly successful new kitchen appliance. The sales manager, who is paid partly on a commission basis, discovers that there has been insufficient product testing to meet government guidelines. The tests so far indicate no likelihood of any safety problem. Action: the sales manager continues to promote the product.
3. A manager of a company is eager to do more business abroad has been requested to make an undisclosed cash payment to a local distributor in a foreign country. The payment is requested as a "goodwill gesture" that will allow the company to introduce its products in that foreign country. This practice is considered normal business procedure in that country, and no laws prohibit such a payment there. Action: the manager verbally authorizes the payment.
4. The owner of a local small business, which is currently in financial difficulty, approaches a longtime friend to borrow and copy a proprietary database software package which will

- be of great help in generating future business. The software package retails for \$500. Action: the friend loans the software package.
5. A manager realizes that the projected quarterly sales figures will not be met, and thus the manager will not receive a bonus. However, there is a customer order which if shipped before the customer needs it will ensure the quarterly bonus but will have no effect on the annual sales figures. Action: the manager ships the order to ensure earning the quarterly sales bonus.
  6. A promising start-up company applies for a loan at a bank. The credit manager at the bank is a friend of and frequently goes golfing with the Company's owner. Because of this company's short credit history, it does not meet the bank's normal lending criteria. Action: the credit manager recommends extending the loan.
  7. A salesman, the father of two small children, has been promoted to a job in what he has to travel away from home for the firm on regular basis. Because the trips are frequent and inconvenience his family life, he's contemplating charging some small personal expenses while traveling for the company. He has heard that this is common practice in the company. Action: the salesman charges the company \$50 family gifts.
  8. The CEO of a company requests to the controller reduce the estimate for bad debts in order to increase reported income, arguing that this is common practice in the industry when times are hard. Historically, the company made very conservative allowances for doubtful accounts, even in bad years. The CEO's request would make it one of the least conservative in the industry. Action: the controller makes the adjustment.

## APPENDIX B

### Course Evaluations Questionnaire

Please Circle the most appropriate answer to evaluate the effectiveness of course/course components and coverage of material using this scale.

1 = no effect      2 = little effect      3 = some effect      4 = much effect      5 = great effect

#### ACCT470 Accounting Policy & Professional Responsibility

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. Relate accounting education to moral issues.   | 1 | 2 | 3 | 4 | 5 |
| 2. Recognize issues in accounting that have ethical implications.   | 1 | 2 | 3 | 4 | 5 |
| 3. Develop a "sense of moral obligation" or responsibility.   | 1 | 2 | 3 | 4 | 5 |
| 4. Develop the abilities needed to deal with ethical conflicts or dilemmas  |   |   |   |   |   |
| Develop the abilities needed to deal with ethical conflicts or dilemmas.  | 1 | 2 | 3 | 4 | 5 |
| 5. Learn to deal with the uncertainties of the accounting profession.   | 1 | 2 | 3 | 4 | 5 |
| 6. "Set the stage for" a change in ethical behavior.  | 1 | 2 | 3 | 4 | 5 |
| 7. Appreciate and understand the history and composition of all aspects of accounting ethics and their relationship to the general field of ethics. | 1 | 2 | 3 | 4 | 5 |

1 = no effect	2 = little effect	3 = some effect	4 = much effect	5 = great effect	
8. Overall effectiveness in evaluating accounting ethical issues.	1	2	3	4	5
9. Treated as colleagues with students encouraged to challenge faculty ideas.	1	2	3	4	5
10. Environment fostered trust between students and faculty.	1	2	3	4	5
11. Encourage the free exchange of ideas.	1	2	3	4	5
12. Encourage the student's ability to analyze moral situations.	1	2	3	4	5

**ACCT470 Examinations**

1. Relate accounting education to moral issues.	1	2	3	4	5
2. Recognize issues in accounting that have ethical implications.	1	2	3	4	5
3. Develop a "sense of moral obligation" or responsibility.	1	2	3	4	5
4. Develop the abilities needed to deal with ethical conflicts or dilemmas.	1	2	3	4	5
5. Learn to deal with the uncertainties of the accounting profession.	1	2	3	4	5
6. "Set the stage for" a change in ethical behavior.	1	2	3	4	5
7. Appreciate and understand the history and composition of all aspects of accounting ethics and their relationship to the general field of ethics.	1	2	3	4	5
8. Overall effectiveness in evaluating accounting ethical issues.	1	2	3	4	5

**ACCT470 Text and Chapter Readings**

1. Relate accounting education to moral issues.	1	2	3	4	5
2. Recognize issues in accounting that have ethical implications.	1	2	3	4	5
3. Develop a "sense of moral obligation" or responsibility.	1	2	3	4	5
4. Develop the abilities needed to deal with ethical conflicts or dilemmas.	1	2	3	4	5
5. Learn to deal with the uncertainties of the accounting profession.	1	2	3	4	5
6. "Set the stage for" a change in ethical behavior.	1	2	3	4	5
7. Appreciate and understand the history and composition of all aspects of accounting ethics and their relationship to the general field of ethics.	1	2	3	4	5
8. Overall effectiveness in evaluating accounting ethical issues.	1	2	3	4	5

**ACCT470 Homework Cases & Presentation**

1. Relate accounting education to moral issues.	1	2	3	4	5
2. Recognize issues in accounting that have ethical implications.	1	2	3	4	5
3. Develop a "sense of moral obligation" or responsibility.	1	2	3	4	5
4. Develop the abilities needed to deal with ethical conflicts or dilemmas.	1	2	3	4	5
5. Learn to deal with the uncertainties of the accounting profession.	1	2	3	4	5
6. "Set the stage for" a change in ethical behavior.	1	2	3	4	5
7. Appreciate and understand the history and composition of all aspects of accounting ethics and their relationship to the general field of ethics.	1	2	3	4	5
8. Overall effectiveness in evaluating accounting ethical issues.	1	2	3	4	5

1 = no effect      2 = little effect      3 = some effect      4 = much effect      5 = great effect

**ACCT470 Research Paper and Presentation**

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. Relate accounting education to moral issues.   | 1 | 2 | 3 | 4 | 5 |
| 2. Recognize issues in accounting that have ethical implications.   | 1 | 2 | 3 | 4 | 5 |
| 3. Develop a “sense of moral obligation” or responsibility.   | 1 | 2 | 3 | 4 | 5 |
| 4. Develop the abilities needed to deal with ethical conflicts or dilemmas.   | 1 | 2 | 3 | 4 | 5 |
| 5. Learn to deal with the uncertainties of the accounting profession.   | 1 | 2 | 3 | 4 | 5 |
| 6. “Set the stage for” a change in ethical behavior.  | 1 | 2 | 3 | 4 | 5 |
| 7. Appreciate and understand the history and composition of all aspects of accounting ethics and their relationship to the general field of ethics. | 1 | 2 | 3 | 4 | 5 |
| 8. Overall effectiveness in evaluating accounting ethical issues  | 1 | 2 | 3 | 4 | 5 |

**Participation/ Class interaction**

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. Relate accounting education to moral issues.   | 1 | 2 | 3 | 4 | 5 |
| 2. Recognize issues in accounting that have ethical implications.   | 1 | 2 | 3 | 4 | 5 |
| 3. Develop a “sense of moral obligation” or responsibility.   | 1 | 2 | 3 | 4 | 5 |
| 4. Develop the abilities needed to deal with ethical conflicts or dilemmas.   | 1 | 2 | 3 | 4 | 5 |
| 5. Learn to deal with the uncertainties of the accounting profession.   | 1 | 2 | 3 | 4 | 5 |
| 6. “Set the stage for” a change in ethical behavior.  | 1 | 2 | 3 | 4 | 5 |
| 7. Appreciate and understand the history and composition of all aspects of accounting ethics and their relationship to the general field of ethics. | 1 | 2 | 3 | 4 | 5 |
| 8. Overall effectiveness in evaluating accounting ethical issues.   | 1 | 2 | 3 | 4 | 5 |

Please provide feedback on the effectiveness of ACCT470 or any feedback you feel appropriate.

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